# **SIERRA**At the Peak of Warewashing

# Sierra drives machine warewashing profitability

Sierra is a multi-product chemical dispensing system for use in machine warewash applications. The advanced features include rack counting, pump and dishmachine runtime, audible alarms, multiple languages and water resistance. Sierra's



patented Virtual Clean Probe™ (VCP) guarantees fewer service calls, better performance and eliminates wasted chemical due to incorrect conductivity readings.

Sierra comes complete with an installation kit, rinse injector and mounting bracket. A universal power supply automatically switches to operate from 100-240 VAC and protects Sierra from damaging power fluctuations.

Installation requires less than 1 hour using an easily-accessible terminal strip, and Sierra is quickly programmed with intuitive text menus. Sierra is easily installed for use with or without a probe in any door or conveyor warewash system.

## Pays for Itself

- Easy setup using text-based programming menus
- Increased hygiene control includes alarms for dirty washwater, low product, out of product
- Reduces detergent overuse and probe maintenance with VCP
- Manages profitability and efficiency with data logging of rack count, pump and dishwasher runtime





# Easy to program. Easy to calibrate. Fewer trouble calls.

# You wish your DVD/Blu Ray™ was this easy...

Sierra is flexible, modular and easy to install for use with any door or conveyer dishmachine. Sierra has a simple menu system and SmartScreens™ that speed your installation by only displaying the information applicable to your setup. Kitchen personnel can always access useful information while a passcode protects the dispenser settings. For deliming, Sierra can be disabled at the touch of a button to prevent detergent waste.

A probe can also be installed at any time by simply connecting the conductivity and/or temperature wires to the internal terminal strip. For maximum flexibility Sierra accepts AC and DC voltage wash and rinse signals. A contact closure pressure switch can also be used to signal the rinse cycle. An optional accessory kit allows use of an external alarm and a low product contact closure switch. Sierra uses the patented Snap-Head<sup>TM</sup> pump to provide reliability and make maintenance simple.

# 3

Beta SnapHead™ Pump

#### PREMIUM PERFORMANCE LIKE L5000XL

Getting superior results means ensuring chemical is properly dispensed. Sierra ensures premium performance with visual and audible alarms. The sonic alarm alerts the operator there is a problem, while the display gives troubleshooting information. For example, the low detergent alarm tells the operator there is not enough chemical in the wash tank. The most common cause of this alarm is an out-of-detergent condition, so the display commands the operator to "Add Detergent".

Dirty wash water, calcium, and food soil can foul the probe and reduce the effectiveness of chemicals. To maximize chemical performance Sierra counts racks and can be programmed to alert the operator to "Drain Tank" after a set number of racks. Sierra uses a patented pulse technology that reduces scaling, while our VCP software eliminates conductivity reading errors due to fouling. If you ever have to clean probes, our patented VCP<sup>TM</sup> software is for you. The combination of Sierra and VCP<sup>TM</sup> delivers optimal results while minimizing chemical costs, maintenance and service calls.



Snap-out terminal block eases wiring connections.

#### NOT ONLY CAN YOU COUNT ON SIERRA, IT WILL COUNT FOR YOU

Sierra logs account management information that can be used to analyze performance and costs. On-board data logging of total racks, racks since last drain, total drains, detergent run hours, and wash on hours is standard with Sierra. The data can then be used to calculate account information like chemical cost per rack and location efficiency.



VCP enables dirty probes to perform as if clean.



A water solenoid and third pump for sanitizer are available on order, and can also be field installed.

# Less training and maintenance. Pays for itself.

## **SPECIFICATIONS**

#### SIZE

#### **Three-Product Enclosure**

Height: 5.75 in / 14.61 cm Width: 15.25 in / 38.74 cm Depth: 5.5 in / 13.97 cm Weight: 4.38 lbs / 2 kg

#### **Two-Product Enclosure**

Height: 5.75 in / 14.61 cm Width: 11.5 in / 29.21 cm Depth: 5.5 in / 13.97 cm Weight: 4.38 lbs / 2 kg

#### **MATERIAL**

ABS – Flame Retardant IP54 Water-Resistant

#### **MOUNTING**

Wall mounted with stainless steel bracket

#### **AMBIENT OPERATING TEMPERATURE**

36 to 120° Fahrenheit (2 to 49° Celsius)

#### **ELECTRICAL POWER CONFIGURATIONS**

100-240VAC, 50-60 Hz, 0.3 Amp (max)

#### **PUMPS**

Peristaltic, dual roller, self-priming and self-checking.

#### **Pump Tubing Material (standard)**

Detergent: Norprene Rinse: BiWall Sanitizer: Norprene

#### **Pump Flow Rates**

Pump 1: Detergent 3/16" ID tube, adjustable 5%

to 100%, 0.24-4.8 oz (7-140 ml) per minute

Pump 2: Rinse 1/16" ID tube, adjustable 5% to 100%,

0.025-0.5 oz (0.75-15 ml) per minute

Pump 3: Sanitizer 1/8" ID tube, adjustable 5% to 100%,

0.01-2 oz (3-60 ml) per minute

#### **TRIGGERS**

#### Wash and Rinse Voltage Range

24 VAC to 240 VAC 30 VDC to 100 VDC

#### Signal Connections

Wash signal is typically connected across either the motor contactor coil or the fill solenoid valve. Rinse signal is typically connected across the rinse solenoid valve.

#### **HYDRAULIC PERFORMANCE**

#### Pump 1: Detergent

Maximum Vacuum 8 in (200 mm) of mercury

Maximum Pressure 1.4 bar (20 psi)

#### Pumps 2 and 3: Rinse and Sanitizer

Maximum Vacuum 8 in (200 mm) of mercury

Maximum Pressure 2.1 bar (30 psi)

#### Solenoid

10 watts, 24 VDC

#### **Alarms**

An adjustable, audible alarm. Set alarm with potentiometer under sliding door of controller. Emits 80db at 4 feet max.(1.22 meters). If required, you may connect a 24VDC, 500mA external alarm.

#### **Low Level Alarm**

Display reads "CHECK PRODUCTS"

#### Overfeed Stop Alarm (probe operation only)

Display reads "DET FEED FAILURE"

#### **Detergent Alarm Timeout**

Display reads "ADD DETERGNT"

#### **Dirty Wash Water Dump Alarm**

Display reads "DRAIN TANK"

#### **Approvals**

CSA, CE approved

## **SPECIFICATIONS** continued

#### **HOW TO ORDER**

Code #	Description
1201193	Three product - pump types: liquid detergent, liquid rinse, liquid sanitizer
1201189	Three product - pump types/solenoid included: brass detergent solenoid, liquid rinse, liquid sanitizer
1201191	Three product - pump types/solenoid included: plastic detergent solenoid, liquid rinse, liquid sanitizer
1201183	Two product - pump types/solenoid included: brass detergent solenoid, liquid rinse
1201185	Two product - pump types/solenoid included: plastic detergent solenoid, liquid rinse
1201187	Two product - pump types: liquid detergent, liquid rinse
1201233	Two product - pump types: liquid detergent/6mmT, liquid rinse/4mmT

#### **SPARE PARTS**

Codo #	Description
Code #	Description
042625	Relay switch
069489	Main PCB with VCP
087751	PCB assembly, power supply, 100-264VAC
E230166	No. 12, solenoid valve assembly, plastic
099312	No. 13, solenoid valve assembly, metal
041235	3/4" hole plug, 7/8" hole plug, all dispensers
090369	Strain relief 3/4"
069666	Cover label
E270005	Mounting bracket

#### **INSTALLATION ACCESSORIES**

Code #	Description
1201231	Add-on sanitizer pump accessory kit
1201240	Add-on pump with detergent tube
1201180	Low level drum and alarm lance requires 1 x 1201005 connector (not included), for 5 gal pail
1203503	Low level drum lance, 30 - 55 gal. pail (alarm probe) requires 1 x 1201005 connector (not included)
1202561	Remote pressure switch

#### SIERRA I - AT THE PEAK OF CONDUCTIVITY

Code #	Description
1211706	Sierra, 1, 2 pump, Beta
1211708	Installation Kit for Sierra I

Call for injector options. Nylon and Stainless Steel rinse injectors available.

# SIERRA I - CONTENTS OF INSTALL KIT (1211709)

Code #	Description
041772	Bulk tubing, polyethylene, 0.250 OD, white, all dispensers
051606	No. 11, blank pump plate (2 each)
E413004	Power cord, srain relief
1208655	Air adjustment 1/8 MPT - 1/4'T (2 each)
1208641	PTFG, elbow, swivel, 1/4 NPT x 14T
E270004	Mounting bracket, stainless steel for 115/230 VAC unit and screws (2 ea.)
EQ0014001	Tie Wraps 7.5" long (10 ea.), .19X7, 4L, nylon, natural
099686	Cable, conductor, 18 gal., blue/brown, DR-2000/ SingleShot
1206997	Cable, 7 conductor, 20 gal., Sierra/H-3000E/ NS-1000E
041235	3/4" hole plug, 7/8" hole plug, all dispensers



#### **Rack Counter**

Sierra records the number of racks since the last drain, and the number since installation, up to 99,999,999. Sierra is excellent for per-rack, activity-based based billing because its counter goes up so high. A lower counting dispenser that only goes up to 9990, for example, would max out much quicker.



#### **Drain Counter**

Sierra counts the total drains. This allows the customer to determine whether the tank is drained often enough.



#### **Pump Run Hours**

Sierra records the total number of hours the detergent and rinse pumps have run. This lets you calculate how much chemical is being used.



#### **Wash On Hours**

Sierra records the hours the wash trigger (or rinse/pressure switch in probeless mode) has been on. With this information you can assess the efficiency of your operation.

